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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/590,278

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EXAMINER

HOFFMANN, JOHN M

ART UNIT

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1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,278	Applicant(s) HIRANO ET AL.	
	Examiner John Hoffmann	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-14 is/are pending in the application.
- 4a) Of the above claim(s) 11-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-10 and 14 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claim 1 requires that the measured pressure coincides with the target value which is set for each heating position. However dependent claim 4 requires the target value is based on calculated value determined by pipe dimension. These are mutually exclusive requirements. Thus claim 4 does not limit claim 1, rather it takes it to a mutually exclusive scope. More simply: claim 1 has been amended to encompass previous claim 2, which was directed to the species of figures 1-4. However original claims 3-4 were directed to the specie of figure 3-4. Thus claim 4 cannot require that the target value is the 'set' value from claim 1, but then it is also a 'calculated' – since they are mutually exclusive.

Claim 4 is not treated further on the merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 14 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one

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skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support for the flow rate pattern being based on a predetermined calculation pattern. There is no indication that the calculation pattern was predetermined. As indicated in [0027] (page 15 of the specification), the calculation pattern calculates the amount of gas to be introduced.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 is not understood because claim 1 does not refer to any dimension. Compare to prior claim 3 which referred to measuring the dimension. Claim 1 has no measuring of a dimension.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5 and 7-10 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Uchiyama 4813989.

Claim 1: The first five lines of present claim 1 is clearly anticipated by Uchiyama, for example at col.1, lines 8-15 and col. 2, lines 32-40. 9 is (or has) an exhaust portion and 8 is (or has) a buffering gas inlet portion. They are connected - at least indirectly - to the silica glass pipe 1. The buffering gas is feedback controlled by feature 11.

As to the "pattern control" according to a flow rate pattern corresponding to heating positions. It is inherent that the amounts of each gas used in Uchiyama is according to the pattern of everything – including a flow pattern and heating positions. That is: as simple matter of conservation of mass, what goes in = the amount deposited + the amount exhausted. And the amount deposited is controlled (at least in part) by the pattern of flow, and the heating positions. Rearranging the equation: the amount exhausted= The amount of material inputted - the amount deposited.

Examiner considers the various amounts to be for the entire process. That is claim stipulates a "step of depositing a glass layer". Examiner considers the step as 'comprising' the depositing a layer - thus can encompass depositing all the layers.

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As to the last 5 lines newly added to claim 1: As per col. 3, lines 9-11 there is a target value that is used for each heating position. Although 7 is not shown being connected directly to the tube, col. 2, lines 47 describes it being "at the other end of reaction tube 1". Also, it appears to be located at substantially the same effective position as applicant's 15 – thus both should measure the same thing.

Claim 5 is met: it is clear that the pipe has all the dimensions.

Claim 7 refers to "the ratio" and "a control range" - however nowhere is either of these explicitly recited. Thus rather than construing an inherent control range in the claim 1 process, Examiner interprets claim 7 to only limit those situations where there is a control range. Since Uchiyama does not disclose a control range, claim 7 does not serve to define over Uchiyama.

Claim 8 : see col.3, lines 15-17.

Claim 9: Uchiyama discloses keeping the pressure constant- thus the rate of change would be 0 Pa per second.

Claim 10: the pressure is always at least atmospheric, thus Uchiyama has a duration of 0.

Claim 14 does not require any steps such as "obtaining" or "predetermining" thus it is deemed that applicant did not intend to limit the claim so as to require such steps. Nevertheless, it is clear that Uchiyama's pattern was obtained. As to it being "based on" a calculation pattern and position information: such can be considered mental steps. By looking at the Uchiyama it is impossible to determine what factors influenced the process - including the pattern. For example a traffic jam could cause an engineer to be

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late for work, thus delaying the start of the process and thus the time frame of the pattern. Whereas applicant may have a very specific way in which the pattern was 'based on' position information, the claim is not limited thereto. Thus claim 14 fails to define over the Uchiyama process.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchiyama.

Uchiyama does not disclose the deposition rate. It would have been obvious to deposit the glass as fast as possible, so as to make the preform (and thus the fiber) as fast as possible.

Response to Arguments

Applicant's arguments filed 12/29/2009 have been fully considered but they are not persuasive.

Applicant disagrees with the Office's position that the amount of material exhausted is controlled by the amount of material deposited and the amount of material input. However there is no indication as to why applicant disagrees with this. It is a basic matter of conservation of mass.

It is also argued that Uchiyama does not obtain or determine any flow rate pattern for the corresponding heating position. Examiner fails to see any relevance,

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because this is not required by the claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It is also argued that Uchiyama does not disclose the flow rate pattern correspond (sic) to heating position on the silica glass pipe. Examiner disagrees. Uchiyama's pattern of control corresponds to all the factors/variables. To 'correspond' means 'to be in conformity or agreement'. Uchiyama's control corresponds because they are all interrelated. To put it another way: Uchiyama's control is sufficient conformity/agreement/correspondence to create fiber preform. There is no disunity or discordance between the pattern of gas flows actually used and the position of the heater. The fact that sought out and obtained a patent shows that all the factors correspond together to make a fiber preform. Applicant gives no rationale as to why correspondence is lacking.

As to the argument that neither the controlled amount deposited nor the controlled amount input corresponds to the claimed flow rate pattern corresponding to heating position. It is clear that they necessarily must correspond. If one deposits 1000 grams of material and inputs 1500 grams of material, the flow rate pattern MUST correspond in that the total amount (over time) must equal 500 grams. If the flow pattern was such that there was 10 grams or 10,000 grams outputted, then one could say it does not 'correspond' to the 1000g/1500g values.

Examiner notes that the terms "pattern-control" and "flow rate pattern" mean substantially the same thing as "control" and "flow-rate" because the flow rate and

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control occur over time, and thus there is a 'pattern'. Note applicant's figures 7a and 7b, which show that the term "pattern" is not a recurring pattern; The pattern can be a single step.

It is also argued that Uchiyama fails to disclose that the target value changes along the heating position. This is not very relevant because the claims do not require changing the target value, nor that it changes along the position. Note, the flow rate of applicant's figure 7(b) is constant for the first 200 mm, and constant for the last 400 mm. Thus Examiner interprets the claims as reading on patterns that are constant for the entire duration.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Thursday, roughly 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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